

Cerebellar Hypoplasia in Cats

By Tammy Hunter, DVM; Cheryl Yuill, DVM, MSc, CVH

What is cerebellar hypoplasia?

Cerebellar hypoplasia is a developmental condition in which the cerebellum of the brain fails to develop properly. The cerebellum is the portion of the brain that controls fine motor skills, balance, and coordination. The condition is not painful or contagious.

What causes it?

Cerebellar hypoplasia most commonly occurs when a pregnant cat becomes infected with **feline panleukopenia virus** and passes the infection to her unborn kittens. The panleukopenia virus preferentially attacks rapidly dividing cells. During the **perinatal period** (i.e., in the last weeks of pregnancy and the first weeks after birth) the cerebellum is undergoing rapid growth and development, making it vulnerable to attack by the virus. The condition may only affect one kitten in a litter or may involve all littermates.

What are the symptoms?

Since the cerebellum is responsible for purposeful movement and coordination, the symptoms of this condition may not become apparent until the kitten starts to try to stand or walk on its own. The severity of the symptoms depends on how much of the cerebellum was affected and at what stage in its development the infection occurred.

The most typical symptoms are jerky or uncoordinated walking, swaying from side to side when trying to walk, a goose-stepping gait called hypermetria, mild head tremors, and/or intention tremors. Intention tremors are tremors that occur when the kitten intends to make some sort of movement. Intention tremors may be present to a minor degree when the kitten walks, but will usually become more pronounced when the kitten tries to do something more involved such as playing with a toy or bending over to drink or eat out of a bowl.

Are there any other causes of this condition?

It is possible that a kitten could develop cerebellar hypoplasia if its mother is severely malnourished during her pregnancy or if the kitten suffers a physical trauma to its brain during the period of time when the cerebellum is developing. However, the most common cause of this condition by far is infection with panleukopenia virus.

What is the treatment?

Since the condition is caused by a lack of development of the brain, there is no treatment.

How can this condition be prevented?

This disease can be prevented by vaccination of female cats against panleukopenia prior to pregnancy.

What is the prognosis?

Kittens with cerebellar hypoplasia are not infectious to other kittens or cats, are not in any pain, and will learn to adapt to their disability over time. They can safely be spayed or neutered, but **must be kept indoors as they are prone to losing their balance and could easily be injured or attacked if they go outdoors.** If their symptoms are pronounced, they may require special modifications in their home environment, including **dishes that are raised off the floor for easier access, and low-sided litterboxes.**

Although some kittens may be more prone to minor injuries associated with falls, all of them are able to have a normal life expectancy provided they are given some extra tender loving care.

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